

Efectos del Yang Shi Taijiquan en la condición física funcional de los adultos mayores

Yang Shi Taijiquan effects in the functional physical condition of elderly adults

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El trabajo se realizó con la finalidad de elaborar una alternativa de ejercicios físicos del Yang Shi Taijiquan para mejorar la condición física funcional de los adultos mayores de 60 años en el círculo de abuelos "José María Queralt" perteneciente a la Facultad de Cultura Física. Se realizó un estudio de intervención acción dividido en 4 fases donde se aplicó la alternativa (técnicas del Yang Shi Taijiquan condensadas en un método terapéutico nombrado Wai San He Fa) en este círculo de abuelos. Para el procesamiento de datos fue empleado el SPSS 15.0. Se demostró una mejoría significativa en los componentes de la condición física funcional en la población estudiada.

Palabras clave: Adultos mayores; Yang Shi Taijiquan; Actividad física comunitaria; Condición física funcional

ABSTRACT

The work was carried out with the purpose of developing an alternative of physical exercises of Yang Shi Taijiquan to improve the functional physical condition of adults over 60 years in the circle of grandparents "José María Queralt" belonging to the Faculty of Physical Culture. An action intervention study was divided into 4 phases where the alternative was applied (Yang Shi Taijiquan techniques condensed in a therapeutic method named Wai San He Fa) in this circle of

grandparents. For data processing, SPSS 15.0 was used. A significant improvement was demonstrated in the components of the functional physical condition in the population studied.

Key words: Older adults; Yang Shi Taijiquan; Community physical activity; Functional physical condition

INTRODUCCTION

Aging as a natural, progressive and irreversible process brings with it biological, psychological and social changes, which leads to a decrease in functional capacity and makes the adult over 60 years more dependent on the people who are part of their environment and with it a predisposition to greater fragility. This process of life that involves cellular, organic and of course functional changes, according to (Betancourt, 2017) is a genetic programming influenced both by environmental factors and by the individual's ability to adapt.

In essence this is a period of physiological decline in the development process of the individual, it starts from birth, and from the third decade of life there is a moment where a change originates in which the catabolic processes prevail over the anabolic processes, stimulating loss in the reserve mechanisms of the organism, leading to an increase in vulnerability to environmental shocks, and of course causes an increase in the chances of getting sick and that invariably ends with death.

Currently, the population aging index in Cuba exceeds 20% and it is estimated that by 2025, people over 60 will be 26% of the total population, also increasing men and women over 80 years. In the Guantnamo municipality specifically, a total of 227,535 people 109,782 are men and 117,753 women with a population aging rate of 19.1%.

In this population, when a progressive deterioration in their functional performance is shown, an increase in their physical, cognitive and emotional dependence is generated, which is reflected in the decrease in their ability to properly fulfill the activities of daily life.

This causes a variation in the relationship of the adult over 60 with the surrounding environment, which increases the waning that is caused by the aging process. This

highlights the importance of creating new strategies to positively influence quality of life indicators and compensate to some extent the deterioration that occurs in this population.

The physical therapeutic care of this population group in Cuba from the community physical activity is essentially based on the use of the exercises to enhance the cardiorespiratory apparatus and has as a fundamental model gymnastics from the perspective of western countries, to a lesser extent it is also. They recommend oriental therapies (Chinese therapeutic gymnastics, yoga, etc.) although indicated to a greater extent to change the routines of the classes and also with limitations from the methodological point of view.

This article will present the results achieved in the application of an alternative of therapeutic physical exercises in the functional physical condition of a group of older adults belonging to the circle of grandparents "José María Queralt" in the Faculty of Physical Culture of the University of Guantanamo through the use of a selection of Yang Shi Taijiquan techniques.

DEVELOPMENT

An aspect of extraordinary importance in the elderly is the decrease in physical capacity as age progresses, a predictable phenomenon that can be stopped or slowed down with special attention to the level of physical condition and physical activity. Many older people due to their sedentary lifestyles are dangerously close to their maximum capacity level during normal activities of daily living. Getting up from a chair or climbing the stairs requires maximum effort in those elderly people who have poor functional capacity. A small decrease in the level of physical activity in these people could cause the transition from a state of independence to a state of disability characterized by the need for assistance in carrying out daily activities. Consequently, prevention that takes on a special dimension should be encouraged to avoid deteriorating the quality of life and independence of the elderly (Wagner, 1992; Elward; Larson, 1992). Cited by (Gallego, 2006).

When you hear about the physical condition is almost always associated with sports performance, but in its conceptual evolution the physical condition was approaching the concept of health, this product to the relationship of aspects of the

physical condition with the health of people. At present, components that were previously considered related to sports performance (agility, coordination and balance) are included among those related to health due to their close relationship with quality of life.

The physical condition is reflected more today with the search for physical and mental well-being, and particularly when it refers to the population over 60 years of age, it is identified with the physical capacity to develop the normal activities of daily life, intrinsically related to the functionality concept.

In adults older than 60 years the functionality is largely determined through aerobic endurance, strength, flexibility, balance and body composition. There is a close relationship between function and disease, the fragility of people over 60 years is due to the decrease in physiological reserves along with an increase in being susceptible to disability. The health of the adult over 60 years can best be measured in terms of function, with chronic diseases being the main factors associated with functional disability in them.

The importance of functionality was ratified by the American Commission on Chronic Diseases and the WHO, which promoted the development of a scientific basis for measuring functional status. (Galician, 2006). The functionality of people over 60 years of age is decisive with respect to the way in which they can carry out and support the activities of daily living or participate in physical activity programs, which in turn have an influence on their quality of lifetime.

For the above, it is necessary to refer to the concept of functional physical condition provided by (Rikli & Jones, 2001) is "the physical ability to develop normal activities of daily life in a safe and independent way and without excessive fatigue".

The assessment of physical condition in older adults should pursue its determination in functional terms, which according to (Rikli & Jones, 2001) serves to establish the degree of autonomy, independence and quality of life that these people manifest when performing tasks every day at home and in your social life. Cited by (Boyaro & Uncle, 2014). For (Gallego, 2006) the components of the physical condition to be evaluated more relevant in people over 60 are: upper and

lower train strength, aerobic resistance, upper and lower train flexibility, dynamic balance and body composition.

For some time in the community physical activity in Cuba different techniques have been studied to bring a comprehensive treatment to people over 60 years. In this process, benefits and disadvantages have been identified, and we have always sought to implement physical activities aimed at the development and promotion of a health culture so that they have a favorable impact on quality of life indicators.

Among the activities carried out in the community with adults over 60 years of age, the use of the different methods of Chinese Therapeutic Gymnastics (Lian Gong Shi Ba Fa, Dao Yin Bao Shen Gong, Ba Duan Jin) stands out, all with very good results, but mostly focused on the treatment of some chronic condition such as hypertension, diabetes and vertebral algias. Our proposal, however, is based on the use of Yang Shi Taijiquan to improve the functional physical condition in these elderly people.

Being one of the five fundamental schools of Taijiquan and the most practiced in the world, Yang Shi Taijiquan emerges as a combat system, but due to the particular characteristics it presents and modifications made by the descendants of its creator it has spread throughout the world as a formidable system to strengthen health.

In the practice of Yang Shi Taijiquan it is required that the practitioner make movements following circular routes and apply the force as if he were winding a silk thread, guiding all the actions and guarding his power through the joints with an adequate order and linking them each. This allows the body to move always looking for the shape of a sphere, and the ankles and legs, the wrists and the arms, the waist and the spine are constantly rotating, manifesting a continuous spiral movement.

The benefits provided by its practice are widely described in various bibliographic materials, it is involved in the control of different diseases that people over 60 years of age commonly present and enhance components related to functional physical condition such as aerobic resistance. The researchers (Lu & Kuo, 2006) in a comparative study of the effects of Wai Tan Gong and Yang Shi Taijiquan

exercises in the modulation of the Autonomic Nervous System and hemodynamics in older adults, concluded that in a short time of practice these systems enhanced the modulation of the vagus nerve and blood pressure stabilized in those practitioners. We can mention (Solarte; Fernández & Ruíz, 2013) who implemented an exercise program based on the Yang Shi Taijiquan in elderly women in the city of Popayán where it was obtained as results that the functional capacity improved in the aspects evaluated being significant contrasts in running speed, static and dynamic balance; Cognitive ability improved in all the items evaluated, memory, attention, calculation and language being statistically significant; All participants achieved full functionality in basic daily activities.

In this last study (Solarte; Fernández & Ruíz, 2013) they concluded that taking these practices to these people will provide them with important aids in the balance and cognitive capacity, which generates progress in their independence and improves their functional capacity by which could be recommended as a therapeutic alternative in the area of neurorehabilitation.

In Cuba we can mention (Cruz, 2009) and (Miranda, 2016) that in their studies they also enhance the therapeutic benefits in the use of Yan Shi Taijiquan in older adults. However, in the literature review carried out in research in Guantanamo, no work could be found regarding this topic, although we can highlight that, (Tarras, 2006); (Sánchez, 2006) and (López, 2006) cited by (Martínez, 2011), agree on the need for the application of Chinese therapeutic gymnastics, but only focus it on the treatment of high blood pressure.

Taking into account the above, a diagnosis was made in communities of the municipality of Guantanamo to determine the state of physical exercise in the elderly and the following insufficiencies were confirmed:

- Time participation of the population over 60 years in the practice of Yang Shi Taijiquan in the Guantanamo communities.
- The potentialities of human resources in the communities of Guantánamo municipality are not sufficiently exploited for the use of Yang Shi Taijiquan in the therapeutic physical care of adults over 60 years of age.

-There is evidence of limitations in the knowledge of practitioners in grandfather's circles about the benefits of Yang Shi Taijiquan for the improvement of functional physical condition in adults over 60 years.

-in the Combined Sports the overcoming with therapeutic cut that are imparted to teachers for the therapeutic physical care of adults over 60 years in relation to the functional physical condition since the community physical activity is insufficient.

-the guidelines for the use of Chinese therapies in the program for therapeutic physical care of the elderly in community physical activity show inadequacies. In this program it is not defined what specific activities to carry out and how to carry them out.

-therapeutic physical care for older adults in community physical activity needs a theoretical treatment towards their conceptualization. Lacks of methodological theoretical foundations are reflected since there is no theoretical basis to support this process.

These insufficiencies that are manifested as a result of the diagnosis show us limitations in the attention to the functional physical condition of the adult over 60 years in community physical activity, and its necessary enrichment due to the high rate of population aging and high prevalence of conditions associated with aging process. The diverse perspectives with which the authors in the territory have approached the problem are insufficient, and the potentialities of Yan Shi Taijiquan are not exploited.

carried out, with the objective of demonstrating the benefits of practicing Yang Shi Taijiquan in the functional physical condition of adults over 60 years of age in community physical activity. This study was conducted in the circle of grandparents José María Queralt of the Faculty of Physical Culture of the University of Guantanamo, in the period between September 2018 and the month of May 2019. For the data processing the SPSS 15.0 program for Windows was used, a statistical analysis of variables was carried out that allowed measuring the data before and after the exercises were applied.

The total population over 60 years of age was included, all of them have the ability to stay in standing position, are able to walk alone or with the help of a cane or

walker, and with sufficient cognitive ability to understand the instructions given to them.

The participation of all practitioners was voluntary and with medical authorization for their incorporation into the practice of physical exercises in the circle of grandparents. The health and activities questionnaire used in the FallProof program of (Rose, 2005) was also applied, since in this research we worked with a wide range in terms of the age of the participants between 60 and 84 years of age. This questionnaire gave us valuable information that allowed us a better analysis of the physiological background of each practitioner before applying the initial tests and carrying out our proposal.

The study was divided into four phases, in the first phase the functional physical condition was evaluated through the Senior Fitness Test (SFT). The SFT is a protocol for the evaluation of the functional physical condition (Rikli & Jones, 2001) created under a series of requirements that make it one of the most widely accepted at international level and does not require large space or equipment to apply it.

It has a relatively short implementation time, when compared with other tests of its kind and for its execution a written consent is required from those evaluated, after they have been informed of their objectives and risks. In that document they must express their free will to participate in the test and that they are in the necessary health conditions.

After obtaining the results of this first phase, the second stage was applied, where it was intervened using the proposed alternative: a selection of Yang Shi Taijiquan techniques condensed in a therapeutic method named Wai San He Fa (method of the three external combinations). We must clarify that this is a therapeutic method of the Nan Pai Wushu Academy of the great teacher Wong Yi Man (president of the academy and 9th Duan), with headquarters in Taishan District in Guangzhou Province, China.

This was carried out by the authors of this article who have years of experience in the practice of traditional Chinese martial arts, including the practice of Yang Shi Taijiquan, having one of them the category of 6th Duan international master trained

under the direct guardianship of the teachers José Antonio Rey García 8th Duan and international director of the mentioned academy, in addition to the teacher Mirian Vargas Iribar 7th Duan. We should also mention that everyone has long experience in the physical care of older adults.

This study was carried out on the grounds of the Faculty of Physical Culture of the University of Guantanamo with the appropriate conditions for the practice of the selected exercises and the SFT tests. Classes were held three times a week with a duration of between 45 and 50 minutes for three months (12 weeks).

Initial part: 10 minutes.

Self-massage techniques were performed (12 maneuver method to improve health and prolong life), stretching exercises belonging to the Tong Zi Bai Fo Gong (The method of stretching of the child who reveres Buddha), specific exercises for joint amplitude that They are commonly performed before starting the training sessions and the corresponding actions to determine if there were health conditions for physical exercises.

Main part: from 30 to 35 minutes.

The eight techniques that form the alternative (Wai San he Fa) were performed:

Exercise 1. Ti Shon Gong (raise the spirit).

Exercise 2. Tui Shan Fa (Push the mountain).

Exercise 3. Dao Nian Hou (Step back by pushing the monkey).

Exercise 4. She Shen Xia Shi (the snake descends on the ground).

Exercise 5. Yun Shou (move your hands like clouds).

Exercise 6. Yin Ying Yan He (harmonize Yin and Yang).

Exercise 7. Shuang Feng Guan Er (the wind blows in both ears).

Exercise 8. Tian Di Xie Tiao (balance heaven and earth).

Final part: fundamentally exercises of reeducation of breathing and stretching exercises previously selected were carried out with the aim of taking these people to levels of pulsations and parameters close to those shown at the beginning of the sessions, this lasted five minutes. We must mention that in these classes the principles of training were always present: proper selection of exercises, intensity, dosage, duration and individualization.

In the third phase an evaluation was carried out, where the same tests of the initial evaluation (SFT) were applied. At this stage, the data collected during these three months of practice was collected to assess how these practitioners responded to the physical work to which they were subjected. After analyzing these data and perceiving that all the practitioners responded adequately and with favorable results, the same work methodology was continued for another 12 weeks.

In the fourth and final stage the seven SFT batteries were applied again and the final analysis of the results obtained in this last test was carried out.

A total of 34 adults over 60 years of age were evaluated and all concluded, with an average class attendance above 70%. Of the total population evaluated, 27 were women and the remaining 7 men, representing 79.4% and 20.6% respectively.

Regarding the functional physical capacity before and after applying the alternative of therapeutic physical exercises based on the Yang Shi Taijiquan, specifically the Wai san He Fa (method of the Wong Yi Man Nan Pai Academy) it could be seen that in terms of BMI there were no significant changes, although we must point out that all practitioners from the first measurement were among the ranges considered optimal for this population group.

In summary, the physical condition components evaluated through the SFT and that have a direct influence on the level of functionality of people over 60 years of age reflected a considerable improvement. An important aspect to keep in mind is that in this population over 60 years of age, the objective of physical exercise programs is to achieve or maintain each of those components of physical fitness in the values considered normal for each age group.

CONCLUSIONS

The proposed alternative consisting of eight exercises of the Yang Shi Taijiquan under the name of Wai San He Fa showed a considerable improvement in the functional physical condition in this population studied in a relatively short time. There was also an increase in confidence to carry out daily activities because with the improvement of these components there is a considerable decrease to falls that is one of the main causes of suffering disability in these people.

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